

What is claimed is:

1. A method for mobile data collection comprising the steps of:
 - a. inputting one or more forms of data into one or more handheld devices;
 - b. organizing said inputted data into a record; and
 - 5 c. synchronizing data from said record for manipulating said data into one or more classifications to form synchronized data.
2. The method of claim 1 wherein said one or more forms of data are selected from the group consisting text, digital photographs, digital video, barcodes, digital sketches, digital signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan, and interactive data
10 retrieval from another system.
3. The method of claim 1 wherein said data is inputted into said handheld device in step a. using a data collection template.
4. The method of claim 3 further comprising the steps of:
 - 15 toggling between said step a. of inputting data using a data collection template; and inputting data from a digital camera,
 - wherein said data from said digital camera is inputted into said record with said data from said data collection template at the time of capture of said data from said digital camera.
5. The method of claim 4 wherein after said step of inputting data from said digital camera further comprising the steps of:
 - 20 overlaying an electronic sketch over said data from said digital camera,
 - wherein said data from said digital camera and said overlaid electronic sketch is inputted into said record with said data from said data collection template at the time of capture of data from said digital camera.
6. The method of claim 3 wherein after step c. further comprising the steps of:
 - 25 d. optimizing said synchronized data based on a predetermined criteria; and
 - e. generating an optimized data collection template; and
 - repeating steps a. through c. wherein said data is inputted into said handheld device in step a. using said optimized data collection template.
7. The method of claim 6 wherein said predetermined criteria is a frequency of use
30 of said data inputted into said handheld device.

8. The method of claim 6 wherein said predetermined criteria is a desired information request.

9. The method of claim 6 wherein said predetermined criteria is a statistical program.

5 10. The method of claim 6 wherein said step d. optimizing said synchronized data further comprises the step of:

adding answers inputted in said data collection template to said optimized data collection template.

11. The method of claim 3 wherein said data collection template comprises:

10 a user interface comprising one or more prompts for gathering said data using said handheld device, said prompts being visual, sound, code, or vibration.

12. The method of claim 6 wherein said optimized data collection template comprises:

15 a user interface comprising one or more prompts for gathering said data using said handheld device, said prompts being visual, sound, code, or vibration.

13. The method of claim 3 wherein said data collection template is an electronic form comprising one or more menus or submenus.

14. The method of claim 13 wherein said optimized data collection template is an electronic form comprising one or more submenus which are a re-order of entries of said one or
20 more menus or submenus of said data collection template.

15. The method of claim 1 wherein after said step c. of synchronized data further comprising the step of:

forwarding said record to a central processing system and said step c. is performed at said central processing system.

25 16. The method of claim 1 further comprising the step of:
storing said synchronized data.

17. The method of claim 1 further comprising the step of:
generating a report from said synchronized data.

18. The method of claim 17 further comprising the step of:
30 printing said report.

19. The method of claim 17 wherein said report is a standard or custom report.

20. The method of claim 1 wherein before step a. further comprises the step of:
forwarding a previously generated record to said handheld device.

21. The method of claim 1 wherein said step c. of synchronizing data step comprises
the steps of:

5 manipulating said data in said record into a synchronization table; and
filtering said data in said synchronization table to one or more relationship tables.

22. The method of claim 21 further comprising the steps of:

combining said one or more relationship tables based on a predetermined criteria for
generating an optimized data collection template and repeating steps a. through c. wherein
10 subsequent data is inputted into said handheld device using said optimized data collection
template.

23. The method of claim 1 wherein a plurality of handheld devices are used for
imputing said data.

24. A system for mobile data collection comprising:

15 means for inputting one or more forms of data into one or more handheld devices;
means for organizing said inputted data into a record; and
means for synchronizing data from said record for manipulating said data into one or
more classifications to form synchronized data.

25. The system of claim 24 wherein said one or more forms of data are selected from
20 the group comprising text, digital photographs, digital video, barcodes, digital sketches, digital
signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan and interactive data
retrieval from other systems.

26. The system of claim 24 wherein said handheld device further comprises a
computing device, a data input screen and a stylus for interacting with said data input screen.

25 27. The system of claim 24 wherein said handheld device further comprises a digital
camera mounted on said handheld device.

28. The system of claim 24 further comprising a barcode reader connected or
mounted to said handheld device.

29. The system of claim 24 further comprising a port adapted to receive information
30 from engineering tools of field measuring equipment.

30. The system of claim 29 wherein said field measurement equipment is selected from one or more of the group consisting of: torque gauge, tag measure, pressure gauge, micrometer, hardness meter, thickness gauge, speed gauge, velocity gauge, air flow gauge, wind speed gauge, temperature gauge, humidity gauge, voice recognition hardware, voice capture
5 hardware, retinal scan hardware, finger print scan hardware, environmental data collector, follicle code, breathalyzer reading hardware, face recognition hardware, IR camera, radar, microwave transmission, radiation transmission, telephone transmission, cable transmission, low voltage transmission, gamma ray transmission, electric current, medical instrument, and chemical composition device.

10 31. The system of claim 24 further comprising an expansion slot for receiving portable memory means for storing data or communication means for communicating with said handheld device.

32. The system of claim 24 further comprising:
means for optimizing said synchronized data based on a predetermined criteria; and
15 means for generating an optimized data collection template;
wherein subsequent data is inputted into said handheld device using said optimized data collection template.

33. The system of claim 32 wherein said predetermined criteria is a frequency of use of said data inputted into said handheld device.

20 34. The system of claim 32 wherein said predetermined criteria is a desired information request.

35. The system of claim 32 wherein said predetermined criteria is a statistical program.

36. The system of claim 32 wherein said means for optimizing comprises:
25 means for adding new answers inputted in said data collection template to said optimized data collection template.

37. The system of claim 24 wherein said data collection template comprises a user interface comprising one or more prompts for gathering said data using said handheld device, said prompts being visual, sound, code or vibration.

38. The system of claim 24 wherein said optimized data collection template comprises a user interface comprising one or more prompts for gathering said data using said handheld device, said prompts being visual, sound, code or vibration.

39. The system of claim 24 wherein said data collection template is an electronic
5 form comprising one or more menus or submenus.

40. The system of claim 39 wherein said optimized data collection template is an electronic form comprising one or more menus or submenus comprising a re-order of entries of said one or more menus or submenus of said data collection template.

41. The system of claim 24 further comprising:
10 means for forwarding said record to a central processing system and said synchronization means is performed at said central processing system.

42. The system of claim 24 further comprising:
means for storing said synchronized data.

43. The system of claim 24 further comprising:
15 means for generating a report from said synchronized data.

44. The system of claim 41 further comprising:
means for printing said report.

45. The system of claim 42 wherein said report is a standard report or custom report.

46. The system of claim 24 further comprising:
20 means for forwarding a previously generated record to said handheld device.

47. The system of claim 24 wherein said means for synchronizing data comprises means for manipulating said data in said record into a synchronization table, and means for filtering said data in said synchronization table to one or more relationship tables.

48. The system of claim 46 further comprising means for combining said one or more
25 relationship tables based on a predetermined criteria for generating an optimized data collection template.

49. The system of claim 24 wherein a plurality of handheld devices are used for inputting said data.

50. A method for mobile data collection in inspection of a fire barrier comprising the
30 steps of:

- a. inputting one or more forms of data of an inspection of said fire barrier into one or more handheld devices using data collection templates;
 - b. organizing said inputted data into a record; and
 - c. synchronizing data from said record for manipulating said data into one or more
- 5 classifications to form synchronized data.

51. The method of claim 50 wherein said one or more forms of data are selected from the group consisting text, digital photographs, digital video, barcodes, digital sketches, digital signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan, and interactive data retrieval from another system.

10 52. The method of claim 50 wherein said data is in the form of a barcode attached to said fire barrier.

53. The method of claim 51 further comprising the steps of:

toggling between said step a. of inputting data using a data collection template; and
inputting data from a digital camera,

15 wherein said data from said digital camera is inputted into said record with said data from said data collection template at the time of capture of said data from said digital camera.

54. The method of claim 51 wherein after said step of inputting data from said digital camera further comprising the steps of:

overlaying an electronic sketch over said data from said digital camera,

20 wherein said data from said digital camera and said overlaid electronic sketch is inputted into said record with said data from said data collection template at the time of capture of data from said digital camera.

55. The method of claim 51 wherein after step c. further comprising the steps of:

d. optimizing said synchronized data based on a predetermined criteria; and

25 e. generating an optimized data collection template; and

repeating steps a. through c. wherein said data is inputted into said handheld device in step a. using said optimized data collection template.

56. The method of claim 51 wherein said step d. optimizing said synchronized data further comprises the step of:

30 adding answers inputted in said data collection template to said optimized data collection template.

57. The method of claim 51 wherein said data collection template is an electronic form comprising one or more menus or submenus.

58. The method of claim 55 wherein said optimized data collection template is an electronic form comprising one or more submenus which are a re-order of entries of said one or more menus or submenus of said data collection template.

59. The method of claim 51 wherein a repair order is generated from said synchronized data.

60. The method of claim 51 wherein a report of said fire barrier is generated from said synchronized data.

61. The method of claim 59 further comprising the step of:
re-inspecting said fire barrier after a repair of said fire barrier is performed from said repair order.

62. The method of claim 59 further comprising the step of:
storing said synchronized data.

63. The method of claim 59 further comprising the steps of:
combining said one or more relationship tables based on a predetermined criteria for generating an optimized data collection template and repeating steps a. through c. wherein subsequent data is inputted into said handheld device using said optimized data collection template.

64. A method for mobile data collection in a quality assurance application comprising the steps of:

a. inputting one or more forms of data of quality assurance into one or more handheld devices using data collection templates;

b. organizing said inputted data into a record; and

c. synchronizing data from said record for manipulating said data into one or more classifications to form synchronized data.

65. The method of claim 64 wherein said one or more forms of data are selected from the group consisting text, digital photographs, digital video, barcodes, digital sketches, digital signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan, and interactive data retrieval from another system.

66. The method of claim 64 further comprising the steps of:

toggling between said step a. of inputting data using a data collection template; and
inputting data from a digital camera,

wherein said data from said digital camera is inputted into said record with said data from
said data collection template at the time of capture of said data from said digital camera.

5 67. The method of claim 64 wherein after said step of inputting data from said digital
camera further comprising the steps of:

overlaying an electronic sketch over said data from said digital camera,

wherein said data from said digital camera and said overlaid electronic sketch is inputted
into said record with said data from said data collection template at the time of capture of data
10 from said digital camera.

68. The method of claim 64 wherein after step c. further comprising the steps of:

d. optimizing said synchronized data based on a predetermined criteria; and

e. generating an optimized data collection template; and

repeating steps a. through c. wherein said data is inputted into said handheld device in
15 step a. using said optimized data collection template.

69. The method of claim 64 further comprising the step of:
storing said synchronized data.

70. The method of claim 64 further comprising the step of:
generating a report of quality assurance from said synchronized data.

20 71. A method for mobile data collection in a boat survey application comprising the
steps of:

a. inputting one or more forms of data of a boat survey into one or more handheld
devices using data collection templates;

b. organizing said inputted data into a record; and

25 c. synchronizing data from said record for manipulating said data into one or more
classifications to form synchronized data.

72. The method of claim 71 wherein said one or more forms of data are selected from
the group consisting text, digital photographs, digital video, barcodes, digital sketches, digital
signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan, and interactive data
30 retrieval from another system.

73. The method of claim 71 further comprising the steps of:

toggling between said step a. of inputting data using a data collection template; and
inputting data from a digital camera,
wherein said data from said digital camera is inputted into said record with said data from
said data collection template at the time of capture of said data from said digital camera.

5 74. The method of claim 71 wherein after said step of inputting data from said digital
camera further comprising the steps of:

 overlaying an electronic sketch over said data from said digital camera,
 wherein said data from said digital camera and said overlaid electronic sketch is inputted
into said record with said data from said data collection template at the time of capture of data
10 from said digital camera.

 75. The method of claim 71 wherein after step c. further comprising the steps of:
 d. optimizing said synchronized data based on a predetermined criteria; and
 e. generating an optimized data collection template; and
repeating steps a. through c. wherein said data is inputted into said handheld device in
15 step a. using said optimized data collection template.

 76. The method of claim 71 further comprising the step of:
storing said synchronized data.

 77. The method of claim 71 further comprising the step of:
generating a report from said synchronized data.

20 78. A method for data collection in a police department application comprising the
steps of:

 a. inputting one or more forms of data of a police department application into one or
more handheld devices using data collection templates;

 b. organizing said inputted data into a record; and

25 c. synchronizing data from said record for manipulating said data into one or more
classifications to form synchronized data.

 79. The method of claim 78 wherein said one or more forms of data are selected from
the group consisting text, digital photographs, digital video, barcodes, digital sketches, digital
signatures, audio, GPS, GIS, document scan, print scan, CAD/CAM scan, and interactive data
30 retrieval from another system.

 80. The method of claim 78 further comprising the steps of:

toggling between said step a. of inputting data using a data collection template; and
inputting data from a digital camera,

wherein said data from said digital camera is inputted into said record with said data from
said data collection template at the time of capture of said data from said digital camera.

5 81. The method of claim 78 wherein after said step of inputting data from said digital
camera further comprising the steps of:

 overlaying an electronic sketch over said data from said digital camera,

 wherein said data from said digital camera and said overlaid electronic sketch is inputted
into said record with said data from said data collection template at the time of capture of data
10 from said digital camera.

 82. The method of claim 78 wherein after step c. further comprising the steps of:

 d. optimizing said synchronized data based on a predetermined criteria; and

 e. generating an optimized data collection template; and

15 repeating steps a. through c. wherein said data is inputted into said handheld device in
step a. using said optimized data collection template.

 83. The method of claim 78 further comprising the step of:
storing said synchronized data.

 84. The method of claim 78 further comprising the step of:
generating a report of a police department application from said synchronized data.

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